



**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: Q77191

Koichi OHTO, et al.

Appln. No.: 10/650,193

Group Art Unit: 2826

Confirmation No.: 6245

Examiner: Alexander O. WILLIAMS

Filed: August 28, 2003

For: SEMICONDUCTOR DEVICE HAVING SILICON-DIFFUSED METAL WIRING  
LAYER AND ITS MANUFACTURING METHOD

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 C.F.R. §§ 1.97 and 1.98**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

1. Korean Unexamined Patent Application Publication 1998-084723, published  
January 25, 1998

2. Korean Unexamined Patent Application Publication, 1999-005857, published  
January 25, 1999

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**Q77191**

One copy of each of the listed documents is submitted herewith, except for the following:  
U.S. patents and/or U.S. patent publications; and co-pending non-provisional U.S. applications  
filed after June 30, 2003.

The present Information Disclosure Statement is being filed after the later of three months from the application's filing date and the mailing date of the first Office Action on the merits, but before a Final Office Action, Notice of Allowance, or an action that otherwise closes prosecution in the application (whichever is earlier), and therefore Applicants are filing concurrently herewith a Statement Under 37 C.F.R. § 1.97(e). No fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicants enclose herewith a copy of a corresponding Korean Office Action dated December 2, 2004 and an English translation of the pertinent portions thereof which cites such documents and indicates the degree of relevance found by the foreign patent office.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicants do not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

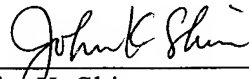
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



John K. Shin

Registration No. 48,409

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Telephone: (202) 293-7060  
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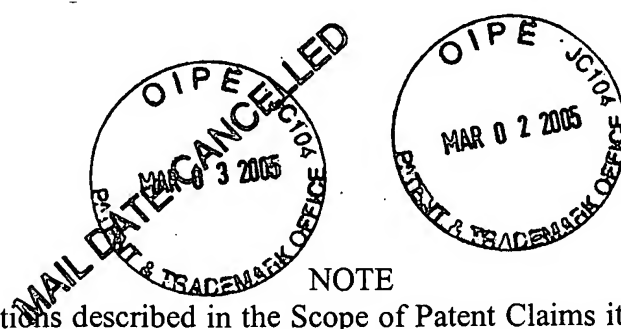
WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: March 2, 2005

Q77191



NOTE

The inventions described in the Scope of Patent Claims items 1, 2, 9 through 14, 45, 46, and 53 through 58 of the invention of the present application are related to a semiconductor device comprising a metal layer containing silicon and the manufacturing method thereof, but this is in the same technical field and has a similar configuration and effect as the multilayer metal routing and formation method thereof of Cited Literature 1 (Korean Unexamined Patent Application Publication 1998-84723, January 25, 1998), and the metal routing formation method of Cited Literature 2 (Korean Unexamined Patent Application Publication 1999-5857, January 25, 1999).

Specifically, the metal routing layer containing silicon, which is the central configurational element of the invention of the present application, is extremely similar to the aluminum alloy layer containing silicon of Cited Literature 1 and the copper routing layer containing silicon of Cited Literature 2, and these actions and effects are also extremely similar.

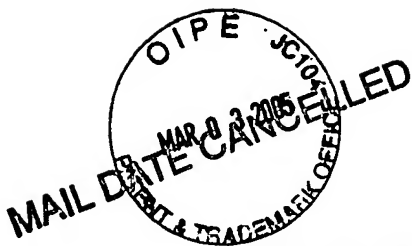
Consequently, we find that the inventions described in the Scope of Patent Claims items 1, 2, 9 through 14, 45, 46, and 53 through 58 of the invention of the present application could have been easily invented from the metal routings and formation methods thereof of Cited Literature 1 and Cited Literature 2 (Patent Law Article 29, Paragraph 2).

(ATTACHMENTS)

Attachment 1: Copy of Korean Unexamined Patent Application Publication  
1998-84723 (January 25, 1998), one copy

Attachment 2: Copy of Korean Unexamined Patent Application Publication  
1999-5857 (January 25, 1999), one copy

END



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**STATEMENT UNDER 37 C.F.R. § 1.97(e)**

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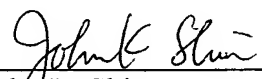
Sir:

The undersigned hereby states, upon information and belief:

That each item of information contained in the Information Disclosure Statement filed  
concurrently herewith was first cited in any communication from a foreign patent office in a  
counterpart foreign application not more than three months prior to the filing of said Information  
Disclosure Statement.

Respectfully submitted,

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